

WHAT IS CLAIMED IS:

1. An information recording medium comprising  
a guide groove along which information is recorded/  
reproduced in an information recording region, the  
5 information being formed as a recorded mark in both  
of concave and convex portions of the guide groove,  
management information including address information  
being recorded by a wobble of the guide groove,

an offset of a reproducing signal of the recorded  
10 mark generated by the wobble of the guide groove is  
5.5% or less of an amplitude of the reproducing signal.

2. An information recording medium comprising  
a guide groove along which information is recorded in  
an information recording region, the information being  
15 formed as a recorded mark in both of concave and convex  
portions of the guide groove, management information  
including address information being recorded by  
a wobble of the guide groove,

wherein an increase/decrease of a width of one of  
20 the concave and convex portions of the guide groove  
generated by the wobble of the other portion is 3% or  
less of one of an interval between the concave portions  
and an interval between the convex portions.

3. An information recording medium comprising  
25 a guide groove along which information is recorded in  
an information recording region, the information being  
formed as a recorded mark in both of concave and convex

portions of the guide groove, management information including address information being recorded by a wobble of the guide groove,

5            wherein an amplitude of the wobble of the guide groove is 3% or less of one of an interval between the concave portions and an interval between the convex portions.

10           4. An information recording medium comprising a guide groove along which information is recorded in an information recording region, the information being formed as a recorded mark in both of concave and convex portions of the guide groove, management information including address information being recorded by a wobble of the guide groove,

15           wherein a signal amplitude by the wobble of the guide groove reproduced by an information recording/reproducing device which irradiates the information recording medium with a light beam to play the information recording medium is 9% or less of a maximum amplitude of a signal produced at the time of when the light beam crosses the guide groove.

25           5. An information recording medium comprising a guide groove along which information is recorded in an information recording region, the information being formed as a recorded mark in both of concave and convex portions of the guide groove, management information including address information being recorded by

a wobble of the guide groove,

wherein an amplitude of the wobble of the guide groove is 0.52% or more of one of an interval between the concave portions and an interval between the convex portions.

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6. An information recording medium comprising a guide groove along which information is recorded in an information recording region, the information being formed as a recorded mark in both of concave and convex portions of the guide groove, management information including address information being recorded by a wobble of the guide groove,

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wherein a signal amplitude by the wobble of the guide groove reproduced by an information recording/reproducing device which irradiates the information recording medium with a light beam to play the information recording medium is 1.6% or more of a maximum amplitude of a signal produced at the time of when the light beam crosses the guide groove.

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7. An information recording method for recording management information by a wobble of a guide groove using a light beam into an information recording medium comprising: a guide groove along which information is recorded in an information recording region, in which user data is recorded/reproduced with respect to both concave and convex portions of the guide groove and in which management information is recorded by the wobble

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of the guide groove, the method comprising:

focusing the light beam on the information recording medium to form the guide groove in the information recording medium;

5        oscillating the light beam to wobble the guide groove in a radial direction of the information recording medium;

judging whether the wobble is 0.52% or more and 3% or less of a guide groove interval; and

10        increasing an oscillating amount, when the wobble is 0.52% or less and decreasing the oscillating amount, when the wobble is 3% or more.

8. An information recording device to record management information by a wobble of a guide groove  
15        into an information recording medium comprising:  
a guide groove along which information is recorded in an information recording region, in which user data is recorded/reproduced with respect to both concave and convex portions of the guide groove and in which  
20        management information is recorded by the wobble of the guide groove, the device comprising:

an optical system which focuses the light beam on the information recording medium to form the guide groove in the information recording medium;

25        an oscillating portion which oscillates the light beam to wobble the guide groove in a radial direction of the information recording medium; and

a controller which controls the oscillating portion so that the wobble is 0.52% or more and 3% or less of a guide groove interval.